Fuel Tracker demo web application a.k.a.

“Tankkitutka”

User guide

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What is 'Tankkitutka'?

Tankkitutka is a demo web application done as a final assignment for the Full Stack Open 2020 programming course.

Purpose of the application is to record and track refueling entries of the user's vehicles.

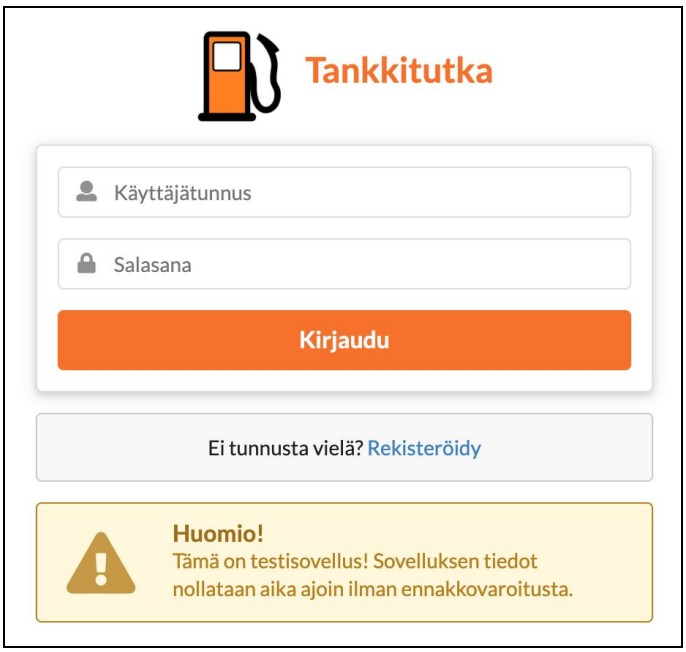
In the following chapters in this document, there are briefly described the views and the features of the application.

Login

The ***Login*** page is the first view the user sees when he opens the application.

If the user has the credentials for the app already, he can sign in with his username and password. Otherwise, the user needs to register a new account for him first.

The Registration form can be opened by clicking the ***Register*** link below the login form.



Registration

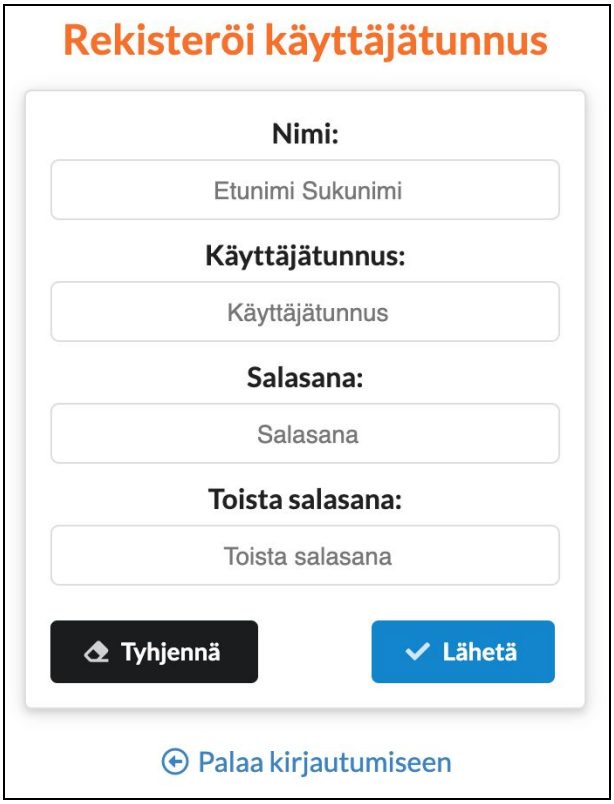
On the Registration form, the user can create a new account for him. All requested details are mandatory.

The given details must fulfill following validation rules:

- **Name:** name must be 5 - 50 non-digit character long and it may contain dash and space
- **Username:** username must be 5 - 12 alphanumeric characters long. Special characters are not allowed
- **Password:** password must be 6 - 32 characters long and it must contain at least one non-digit character, one number and one special character.
- **Confirm password:** password confirmation must be equal with the given password

The user will be notified and the incorrect input field is highlighted if the details provided do not meet the validation rules.

When all given details are OK and the credentials have been added in the service, the user will see the '***operation completed successfully***' message.



Navigation

The ***Navigation bar*** of the application is located on top of the page and it contains three navi-items:

- ***Refuelings:***
    - Link to the main view of the application, lists user's vehicles and their refuelings
- ***Name of the user:***
    - Link to user's profile a.k.a. ***My Details***
- ***Logout button***
    - Logs out the user and redirects him back to login page

Refuelings

After successful login, the user lands on the ***Refuelings*** page.

When a user does not have any vehicles yet, he is instructed to add a vehicle from My details view.

Instead, if the user has already some vehicles added in the service, he will see a listing of these vehicles and their refuelings on the page.

The vehicles are grouped in two categories: the vehicles the ***user owns*** and the vehicles the ***user uses.***

The ***star*** (⭐) icon, in the front of the vehicle's name, indicates that the vehicle is set as a primary vehicle for the user. The primary vehicle element has been expanded by default.

The user is able to expand and collapse the vehicle elements by clicking the title row or the **^** icon.

When using a mobile device having a smaller screen size, the list is treated responsive so that some of the columns are not displayed. If the screen is wide enough, all columns are shown.

Add refueling entry

The user can add a new refueling entry for the vehicle by clicking the ***Add refueling*** link from the header row of the vehicle block which opens the Add Refueling form.

The form contains following fields:

- **Vehicle:**
  - disabled/locked field
  - contains name and license plate id of the vehicle
- **Date:**
  - editable field
  - to be filled with the date when the refueling was done
  - value is selected from calendar
  - default value is the current day
  - selection of future dates is blocked
  - selected date controls which kilometer field is editable: odometer or trip
- **Odometer:**
  - editable field but only if the selected date is the most recent. Otherwise disabled/locked field (and set to zero).
  - to be filled with the odometer kilometers when the refueling was done
  - placeholder text hints the previous odometer value
  - only integer values greater than the previous odometer value are allowed
- **Liters:**
  - editable field
  - to be filled with the amount of refueled liters
  - only numeric values greater than zero are allowed
- **Trip kilometers:**
  - editable field but only if the selected date is not the most recent. Otherwise disabled/locked field.
  - if editable, to be filled with number of trip kilometers driven after previous refueling
  - if disabled/locked, displays calculated trip kilometers when new odometer value has been given
- **Average consumptions:**
  - disabled/locked field
  - displays calculated average consumption value when liters and kilometers has been given

All editable fields are highlighted in green.

The user will be notified and the incorrect input field is highlighted if the details provided do not meet the validation rules. ***Save*** button remains disabled until all required input fields are filled and they have been successfully validated.

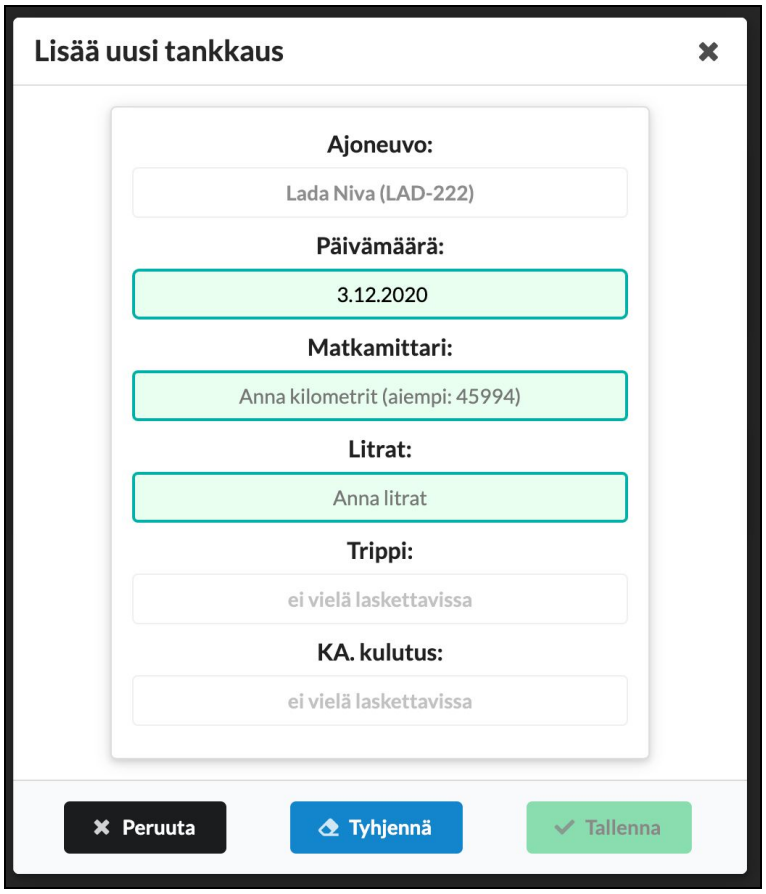
After user has clicked ***Save*** button:

- new refueling entry is recorded in the service,
- if the new refueling entry was the recent one, the vehicle's odometer value is updated with the odometer value defined in the new entry. Otherwise, the vehicle's odometer is not updated.

If the new refueling record has been stored in the service successfully, '***operation completed successfully***' message is displayed. Otherwise, a general error message is shown.

The form can be reset by clicking the ***Clear*** button.

The form can be closed by clicking either the ***Cancel*** button or the ***X*** icon at top right corner.



Browse and edit refueling entry

When the existing refueling entry is clicked, it is opened on the ***Edit Refueling*** form.

The record is editable only if the user has created the record by himself. Or if the user is the owner of the vehicle where the refueling belongs. Edit restriction is notified for the user at the bottom of the form.

The form contains otherwise all the same fields and validation rules than the ***Add Refueling*** form. But in addition, there is also a disabled/locked field ***Refueler*** which tells who has created the refueling entry.

All editable fields are highlighted in green.

User is able to to reset the form by clicking the ***Reset*** button.

The ***Save*** button is active only when some changes have been done and the given values meet the validations rules.

If the edited record is saved successfully, '***operation completed successfully***' message is displayed. Otherwise, a general error message is shown.

The form can be closed by clicking the ***X*** icon at the top right corner.

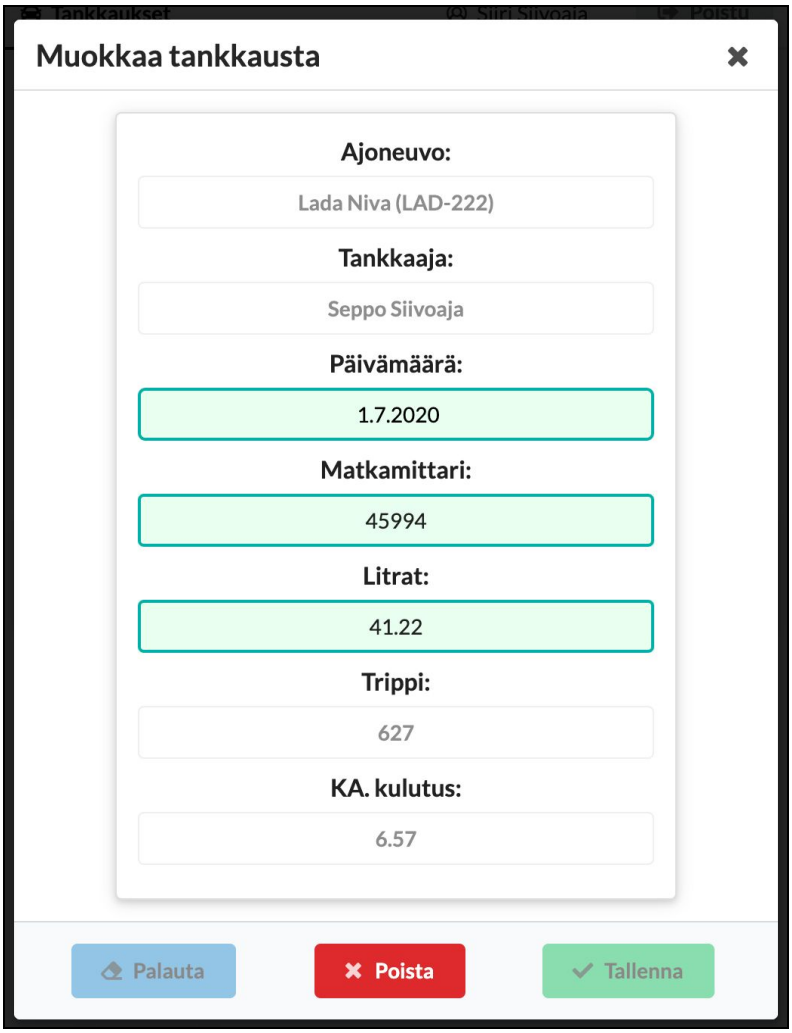
To be noticed when editing refueling entry

When edited record is the recent one

- THEN, the user is able to modify fields ***date***, ***odometer***, ***liters***
- AND, a new trip value is calculated and shown based on the vehicle's odometer and the given new odometer value
- AND, the vehicle's odometer is updated with the new odometer value given in edit.

When edited record is not the recent one

- THEN, the user is able to modify fields ***date***, ***liters***, ***trip***
- AND, the odometer value in the entry remains unchanged
- AND, the vehicle's odometer value remains unchanged


Muokkaa tankkausta
Ajoneuvo:
Lada Niva (LAD-222)
Tankkaaja:
Seppo Siivoaja
Päivämäärä:
1.7.2020
Matkamittari:
45994
Litrat:
41.22
Trippi:
627
KA. kulutus:
6.57
Palauta
Poista
Tallenna

Remove refueling entry

Removing the refueling entry happens from ***Edit Refueling*** form.

User can remove the refueling entry only if he is the refueler or the owner of the vehicle where the entry belongs.

The removal is confirmed from the user before the actual delete operation is performed in the service. Once the record is deleted, it cannot be restored.

If the removal is completed successfully, '***operation completed successfully***' message is displayed. Otherwise, a general error message is shown.

To be noticed when removing refueling entry

When the removed record is the recent one

- THEN, from the vehicle's odometer value is subtracted the trip kilometers defined in the refueling entry to be removed

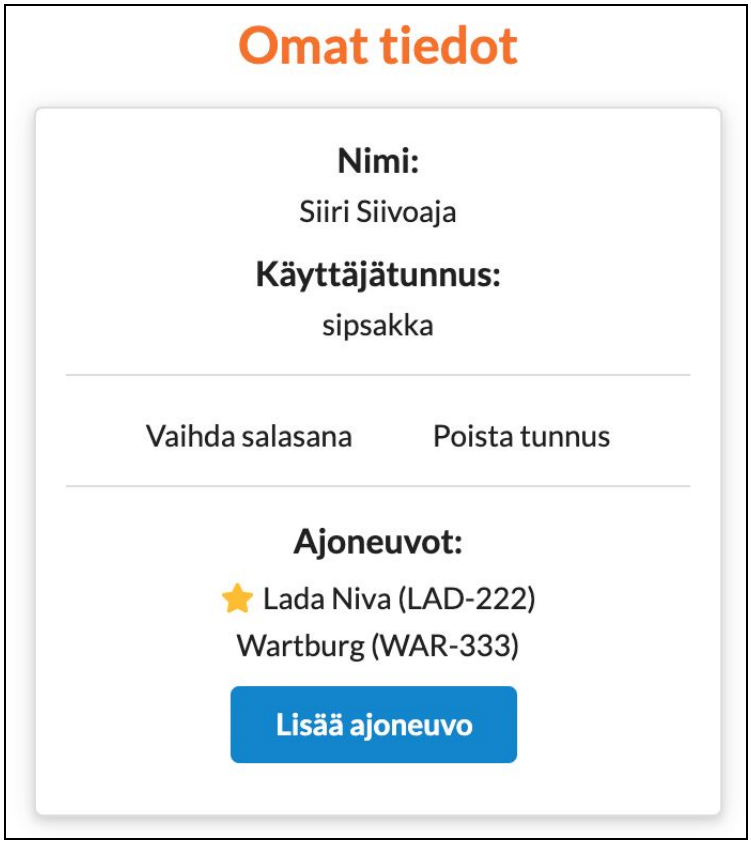
When removed record is not the recent one

- THEN, the vehicle's odometer value remains unchanged

My Details

On ***My Details*** view, there is shown the user's ***name***, ***username*** and listed ***all vehicles*** that user has added in the service. From this view, the user is also able to ***change his password*** and ***delete his entire account*** if desired.

The ***star*** (⭐) icon, in the front of the vehicle's name, indicates that the vehicle is set as a primary vehicle for the user.



Change password

The ***Change password*** form is opened when the user clicks ***Change password*** link from ***My Details*** view.

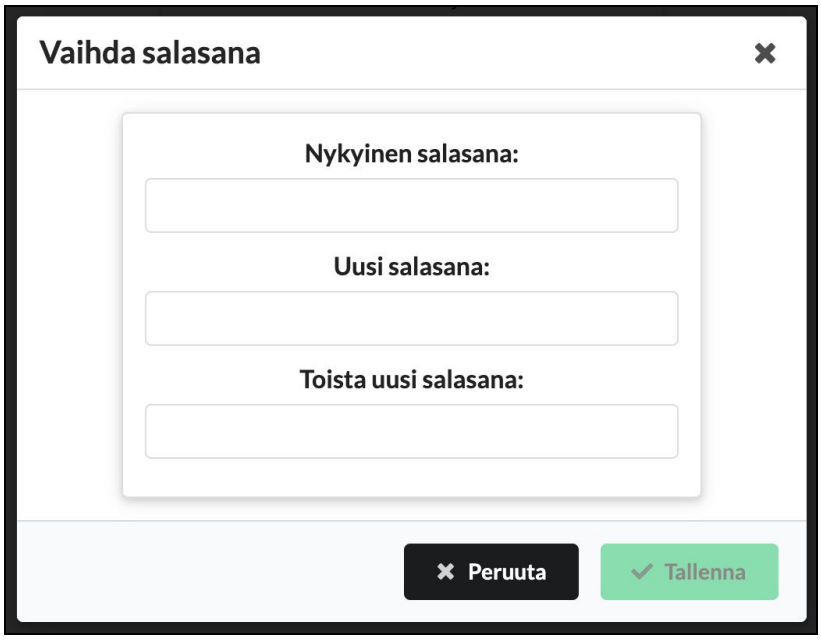
In order to change the password successfully, the user must first give his current password and then give the new password as well as the confirmation of the new password.

New password cannot be the same as the current one and it must be 6 - 32 characters long and it must contain at least one non-digit character, one number and one special character.

If any input field is incorrect, the user is notified and the faulty input field is highlighted in red.

The ***Save*** button is disabled by default. It will be activated only when all fields have been given and the inputs meet the validation criterias.

If the password is changed successfully, '***operation completed successfully***' message is displayed. Otherwise, a general error message is shown.



Add new vehicle

The ***Add new vehicle*** form is opened, when the user clicks the ***Add vehicle*** button from ***My Details*** view.

The form contains following fields:

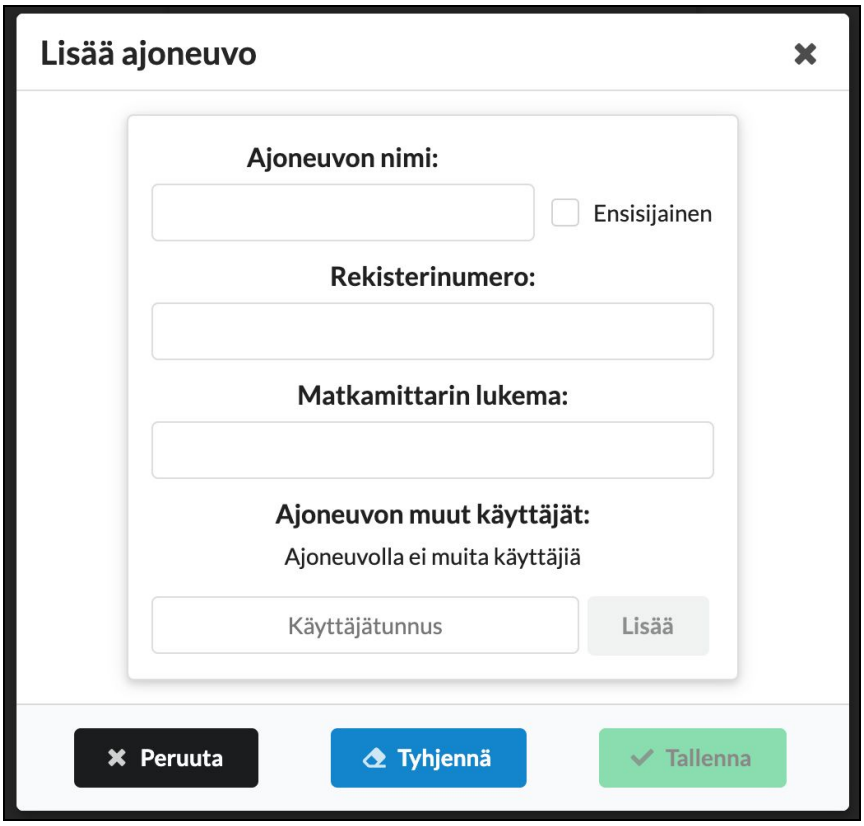
- **Name of the vehicle:**
  - mandatory field
  - acceptable input must be 4 - 20 characters long and it can contain only characters, numbers and one space or dash
- **Primary (checkbox):**
  - optional field
  - by checking the field, user can set the vehicle as a primary for himself
  - only one vehicle at time can be a primary
- **License plate id of the vehicle:**
  - mandatory field
  - acceptable input must follow the Finnish naming convention of license plate ids
- **Odometer value of the vehicle:**
  - mandatory field
  - acceptable input must be an integer value that is greater than zero but smaller or equal than 5 000 000 kilometers
- **Co-owners of the vehicle:**
  - optional field
  - the owner of the vehicle can add from 0 to N co-owners in the vehicle
  - co-owner adding must be performed by co-owner's username, not his real name
  - added co-owner is displayed as a tag (having co-owner's real name)
  - added co-owner can be removed by clicking the ***X*** icon on the tag

The ***Save*** button is disabled by default. It will be activated only when all mandatory fields have been given and the inputs meet the validation criterias.

The form can be reset by clicking the ***Clear*** button.

The form can be closed by clicking either the ***Cancel*** button or the ***X*** icon at top right corner.

If the adding of a new vehicle is completed successfully, '***operation completed successfully***' message is displayed. Otherwise, a general error message is shown.


Lisää ajoneuvo
Ajoneuvon nimi:
Ensisijainen
Rekisterinumero:
Matkamittarin lukema:
Ajoneuvon muut käyttäjät:
Ajoneuvolla ei muita käyttäjiä
Käyttäjätunnus
Lisää
Peruuta
Tyhjennä
Tallenna

Browse and Edit vehicle

When the existing vehicle entry is clicked, the entry is opened on the ***Edit vehicle*** form.

The vehicle entry is editable only if the user is the owner of the vehicle. Edit restriction is notified for the user at the bottom of the form.

- ***EXCEPTION****: Co-owners are able to set/unset the vehicle as primary - even they are not allowed to modify any other details of the vehicle.*

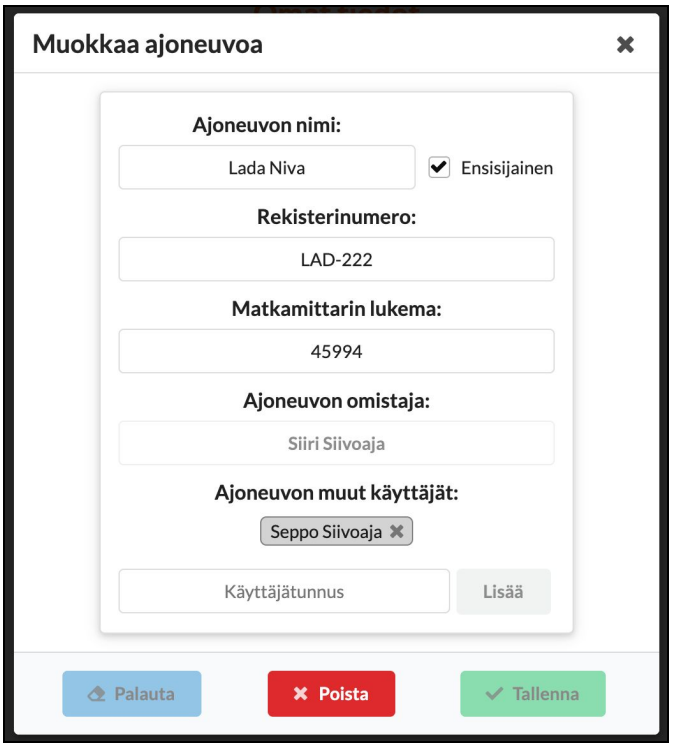
The form contains otherwise all the same fields and validation rules than the ***Add Vehicle*** form. But in addition, there is also a disabled/locked field ***Owner*** telling who is the owner of the vehicle.

User is able to to reset the form by clicking the ***Reset*** button. The button is disabled by default and it is activated only when some changes have applied.

The ***Save*** button is active only when some changes have been done and the given values meet the validations rules.

If the edited vehicle is saved successfully, '***operation completed successfully***' message is displayed. Otherwise, a general error message is shown.

The form can be closed by clicking the ***X*** icon at the top right corner.



Remove vehicle

Removing the vehicle entry happens from the ***Edit Vehicle*** form.

The vehicle entry is removable only if the user is the owner of the vehicle.
When the vehicle is removed, all refueling entries recorded for the vehicle will be removed as well. In addition to this, the vehicle will be removed also from the vehicle list of all the co-owners that have linked in the vehicle.

The removal is confirmed from the user before the actual delete operation is performed in the service. Once the record is deleted, it cannot be restored.

If the removal is completed successfully, '***operation completed successfully***' message is displayed. Otherwise, a general error message is shown.

Remove account

Removing the user account happens from the ***My Details*** view by clicking the ***Delete account*** link.

The user is able to delete only his own account.

When the user account is removed, all the user's vehicles (*including all the linked refueling entries*) will be deleted as well.

The removal is confirmed from the user before the actual delete operation is performed in the service. Once the user account is deleted, it cannot be restored.

If the removal is completed successfully, '***operation completed successfully***' message is displayed. Otherwise, a general error message is shown.

After the user account has been successfully removed, the user is redirected back to the ***Login*** page.